

ALTESS News

Improving the IT Infrastructure Through Innovation and Integration

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Product Manager Acquisition, Logistics and Technology Enterprise Systems and Services (PM ALTESS) serves as the Army acquisition domain gatekeeper. Over the past several years, PM ALTESS has developed several critical applications used by Army AL&T workforce members. Applications such as Web Army Research, Development & Acquisition Budget Update Computer System; Procurement and Research, Development, Test and Evaluation Forms; and Acquisition Information Management have provided necessary functionality to users for budgeting and reporting processes.

At the heart of these applications is the PM ALTESS information technology (IT) infrastructure, which encompasses all aspects of network communication, storage and security. It has evolved from a simple architecture into one built on the latest available technology to provide scalability and redundancy throughout the infrastructure. During the genesis of application development, the systems engineering division's network applications branch began modernizing the infrastructure for current and future growth by implementing the following improvements:

- Redundant load balancing devices to disperse traffic across Web farms to increase performance and provide higher availability.
- Gigabit Ethernet switching to ensure application and database servers could communicate as quickly as possible with the highly transaction-oriented applications architecture.
- Clustered firewalls to provide critical, highly available protection for the infrastructure's assets and applications.
- Additional bandwidth was added in the form of dual fractional DS-3 lines.

Recently, PM ALTESS installed a storage area network (SAN) to meet the large storage requirements of emerging commercial-off-the-shelf and government-off-the-shelf database applications. The SAN infrastructure consists of a 2-gigabit fiber channel switching and an enterprise storage array providing

"five-nines" availability (up to 5 minutes of downtime per year) and scalable to 146 terabytes using current technology. To help ensure data integrity, PM ALTESS modernized its tape backup architecture to include robotic tape libraries that help automate the data backup process by scaling petabytes of data.

Defense in-depth security principles are built into the ALTESS infrastructure. Starting at the Army security router, down to the server level, technologies such as firewalls, intrusion detection, packet filtering and anti-virus are used to secure the infrastructure. Virtual local area networks are used to isolate network traffic into virtual enclaves, increasing security and communication efficiency between groups of assets.

The network applications branch is responsible for the PM ALTESS IT infrastructure. The 14-member team includes government, contractor and student intern staff. They're highly proficient in networking, telecommunications, storage, security and systems administration. Their technical expertise provides the critical "glue" that bonds the infrastructure and ensures it is operating correctly. A key ongoing project is the implementation of a Network Operations Center that will provide the capability to monitor the infrastructure and proactively isolate and resolve problems to enhance network performance and operating environment reliability.

These elements combine to create a very flexible, scalable and available infrastructure to support user requirements. Other Army and DOD agencies have recognized the value and significance of the infrastructure and have selected PM ALTESS as their hosting site. The recent Acquisition Decision Memorandum for the Virtual Insight (VIS) application will further improve the infrastructure. The Oracle® Collaboration and E-Business Suites of the VIS application will create a module-based software infrastructure that builds upon the current hardware infrastructure. The overarching hardware and software infrastructures will provide the framework for future military business systems.

PM ALTESS has succeeded in building a flexible infrastructure capable of meeting virtually any requirement. As gatekeepers for the acquisition domain, PM ALTESS continues growing and improving the infrastructure to the Army horse blanket functional/area processing center concept. Through these improvements, PM ALTESS will pave the way for enterprise business systems by satisfying the requirements of today's military and positioning itself for future customer and network demands.

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